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REMARKS

*Amendments*

In the Specification, the paragraph beginning on page 7, line 7 has been amended to correct a typographical error from "therequest queue 53" to "the request queue 53".

References to the drawing view numbers have been amended in the specification to correspond with the formal drawings. In particular, "Figure" has been changed to "FIG." and "(PRIOR ART)" has been added after FIGs. 1 and 2.

The Abstract, which begins on page 26, line 1, has been amended so that the number of words does not exceed 150, as required in 37 CFR §1.72(b).

Claim 1 has been amended to clarify that "they" refers to "the incoming requests". The terminology "to be discarded" has been eliminated since the discard queue actually stores requests as noted in the claim. The "external listen queue" has been eliminated in this claim because it is inferentially claimed but not required. The terminology "A remaining number of requests to" has been added to eliminate the ambiguity of the previous language and to clarify that the "target number of requests" is not sent to the discard queue.

Claim 2 has been amended to delete the "external listen queue" for which there is no antecedent basis because of the amendment to claim 1 and to provide the proper antecedent basis for the specified processing cycle. The article "the" for the actual and desired queue occupancy has been deleted to remove a possible antecedent basis problem.

Claim 4 has been amended to clarify the operation of the actuator by simplification of the claim language.

Claim 5 has been amended to correctly claim the listen queue.

Claim 9 has been amended to correctly claim the "external listen queue". The terminology "to be discarded" has been eliminated since the discard queue actually stores requests as noted in the claim. The article "the" for the actual and desired queue occupancy has been deleted to remove a possible antecedent basis problem.

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Claim 10 has been amended to delete the indefinite "any" and to provide a proper antecedent basis for the processing cycle.

Claim 12 has been amended for the same reason as claim 4; i.e., to clarify the operation of the actuator.

Claim 13 has been amended to provide the full element name of "external listen queue".

Line numbers for each of the claims have been added with each claim beginning with line 1, as requested.

No new matter has been added.

#### *Claim Rejections - 35 USC §103*

Claims 1-16 are rejected under 35 USC §103(a) as being unpatentable over Smith, (USPN 5,878,224, hereinafter "Smith") in view of Rawson, III et al, (USPN 5,265,252, hereinafter "Rawson").

Smith teaches:

"[A]n apparatus and method for preventing overload of a network server by messages received from a source initiating network server transactions. The method and apparatus use available network traffic measurements to estimate target transaction rates and admission factors, and . . . reducing a rate at which new transactions are initiated by the source to match the incoming transaction workload to the target workload when the offered transaction workload exceeds a threshold." (Smith, Abstract) [deletions for clarity and underlining for emphasis].

Rawson teaches a device driver system with a core that manages the specific functions of a plurality of I/O devices responding to requests from application programs.

"The core includes an operating system interface that is generic to different personal computer operating systems. An operating system has a device driver interface that is unique to the operating system. A conversion program is layered between the core and the operating system for converting communications between the device driver interface of the operating system and the generic operating system interface of the core. The core includes a channel manager including a request dispatcher, request queues, a command initiator, and a plurality of state machines corresponding to state machine in

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the I/O devices. A transport layer interfaces between the hardware and the channel manager." (Rawson, Abstract)

As per claims 1 and 9, Applicants respectfully traverse the rejections since the Applicants' claimed combination, as exemplified in claim 1, includes the limitations not disclosed in Smith or Rawson of:

"An adaptive admission control system for a server application system, comprising:

a request queue that stores incoming requests before the incoming requests are serviced by the server application;

a discard queue that stores requests;

an actuator coupled to the request queue and the discard queue to determine the input rate of the incoming requests during a processing cycle, and to send a target number of requests to the request queue and a remaining number of requests to the discard queue during the next processing cycle;

a controller coupled to the actuator and the request queue to determine the target number based on the difference between actual and desired queue occupancy of the request queue."

Smith as a whole teaches a source control system, which teaches away from the claimed invention. Network traffic measurements are used to reduce the new transactions from the source rather than sending the transactions to different queues before processing.

Rawson as a whole teaches a system in which requests from an application program are converted for controlling I/O devices. This system also teaches away from the claimed invention in teaching the opposite of a system in which requests from a source are sent to different queues before processing by an application.

In *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984), the CAFC stated:

"We have noted elsewhere, as a "useful general rule," that references that teach away cannot serve to create a *prima facie* case of obviousness... If references taken in combination would produce a "seemingly inoperative device, " we have held that such references teach away from the combination and thus cannot serve as predicates for a *prima facia* case of obviousness."

Both Smith and Rawson teach away from the invention and each other, and the references in combination would appear to produce a seemingly inoperative device.

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Further, there has been no showing that there is a specific hint or suggestion in either reference that would lead to the combination. *In re Sang-Su Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002), the CAFC recently held that the conclusion of obviousness may not be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference.

In addition, the Examiner has indicated in the Office Action with regard to Smith:

“a request/listen queue (read mass storage as queue) that stores incoming requests before they are serviced by the server application (402, Fig. 4);” [page 2, item 3, 2<sup>nd</sup> paragraph]

There is no basis for reading “mass storage” as “queue”. These are two different types of devices. Applicants respectfully request documentary evidence pursuant to MPEP §2144.03 and an Examiner Affidavit pursuant to 37 CFR §1.104(d)(2) (2002) disclosing the Examiner’s personal knowledge for the basis of this reading.

Further with regard to Smith, the Examiner has indicated in the Office Action that:

“an actuator coupled to the queue to determine the input rate of requests from the listen queue during previous processing cycles, to send a target number of requests to the request queue from the listen queue and the discard queue during the next processing cycle and a controller coupled to the actuator and the request queue to determine the target number based on the difference between the actual and the desired queue occupancy of the request queue (Fig. 4, 400; col. 2, lines 50-61).” [page 2, item 3, 3<sup>rd</sup> paragraph]

However, Smith Fig. 4, 400; col. 2, lines 50-61, actually teaches differently by stating:

“The present invention overcomes the limitations of conventional techniques by implementing a method...[of] reducing a rate at which new transactions are initiated by the source to match the incoming transaction workload to the target workload when the offered transaction workload exceeds a threshold.” [deletion, insertion, and underlining for clarity]

With regard to Rawson, the Examiner has indicated in the Office Action on page 3, item 4, 1<sup>st</sup> paragraph:

“However, Rawson teaches a discard queue (card request queue) that stores requests to be discarded (col. 5, lines 38-44).”

However, Rawson col. 5, lines 38-44, when taken as a whole, teaches the processing of application program commands to various I/O devices rather than requests to be serviced by a server application. This is made clear in Rawson col. 4, lines 3-5:

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"Referring to FIG. 2, application programs 16 access I/O devices 32-35  
by issuing I/O requests as system calls 43 to the operating system."  
[underlining for clarity]

As per claims 2 and 10, as explained above, Smith as a whole does not teach the claimed system since Smith col. 2, lines 50-61, actually teaches away from the claimed limitation because Smith reduces the number of source requests. Further, there has been no showing that there is a specific hint or suggestion in either reference that would lead to the combination as required by *In re Sang-Su Lee*, *supra*.

As per claims 3 and 11, as explained above, Rawson col. 5, lines 38-49, when taken as a whole, teaches the processing of application program commands to various I/O devices and teaches away from requests being serviced by a server application. Further, there has been no showing that there is a specific hint or suggestion in either reference that would lead to the combination as required by *In re Sang-Su Lee*, *supra*.

As per claims 4 and 12, there has been no showing that there is a specific hint or suggestion in either reference that would lead to the combination as required by *In re Sang-Su Lee*, *supra*.

As per claims 5 and 13, as explained above, Rawson col. 5, lines 38-49, when taken as a whole, teaches the processing of application program commands to various I/O devices and teaches away from requests being serviced by a server application. Further, there has been no showing that there is a specific hint or suggestion in either reference that would lead to the combination as required by *In re Sang-Su Lee*, *supra*.

As per claims 6 and 14, as explained above, both Smith and Rawson teach away from the invention and each other, and the references in combination would appear to produce a seemingly inoperative device so as to be an unobvious combination under *In re Gordon*, *supra*. Further, there has been no showing that there is a specific hint or suggestion in either reference that would lead to the combination as required by *In re Sang-Su Lee*, *supra*.

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As per claims 7 and 15, it is respectfully submitted that Rawson deals with requests from application programs to operate I/O devices, so there are no "sessions" involved. Further, there has been no showing that there is a specific hint or suggestion in either reference that would lead to the combination as required by *In re Sang-Su Lee*, *supra*.

As per claims 8 and 16, as explained above, both Smith and Rawson teach away from the invention and each other, and the references in combination would appear to produce a seemingly inoperative device so as to be an unobvious combination under *In re Gordon*, *supra*. Further, there has been no showing that there is a specific hint or suggestion in either reference that would lead to the combination as required by *In re Sang-Su Lee*, *supra*. Still further, in Rawson, there is no reason why it would be necessary for a queue to be cleaned up since no "sessions", which could become stale, are involved.

Based on the above, it is respectfully submitted that claims 1-16 are unobvious under 35 USC §103(a) and are patentable over Smith in view of Rawson.

Claims 17-18 are rejected under 35 USC §103(a) as being unpatentable over Smith, (USPN 5,878,224, hereinafter "Smith") in view of Rawson, III et al, (USPN 5,265,252, hereinafter "Rawson") further in view of the Applicants Admitted Prior Art (hereinafter AAPA).

As per claims 17 and 18, as explained above, both Smith and Rawson teach away from the invention and each other, and the references in combination would appear to produce a seemingly inoperative device so as to be an unobvious combination under *In re Gordon*, *supra*. Further, there has been no showing that there is a specific hint or suggestion in Smith, Rawson, or AAPA that would lead to the combination as required by *In re Sang-Su Lee*, *supra*.

Based on the above, it is respectfully submitted that claims 17-18 are unobvious under 35 USC §103(a) and are patentable over Smith in view of Rawson and further in view of AAPA.

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The other references cited by the Examiner showing the prior art have been considered and are not believed to disclose, teach, or suggest, either singularly or in combination, Applicants' invention as claimed.

#### *Drawings*

Applicants respectfully submit formal drawings to be substituted for the informal drawings originally filed. The word "Figure" in the informal drawings has been replaced with "FIG." as required under 37 CFR § 1.84 (u) (1). Examiner's approval of the entry of these drawings is respectfully requested. No new matter has been added.

#### *Conclusion*

In view of the above, it is submitted that the claims are in condition for allowance and reconsideration of the rejections is respectfully requested. Allowance of claims 1-18 at an early date is solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including any extension of time fees, to Deposit Account No. 08-2025 and please credit any excess fees to such deposit account.

Respectfully submitted,



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